

What is claimed is:

1. An isolated polynucleotide encoding a breast cancer-specific antibody fragment including
SEQ ID NO:1.

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2. A hybridization probe comprising the polynucleotide of claim 1 and a detectable label.

3. A polynucleotide fragment that is fully complementary to a corresponding segment of the
polynucleotide of claim 1.

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4. An isolated polynucleotide encoding a breast cancer-specific antibody fragment including
SEQ ID NO:2.

5. A hybridization probe comprising the polynucleotide of claim 4 and a detectable label.

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6. A polynucleotide fragment that is fully complementary to a corresponding segment of the
polynucleotide of claim 4.

7. An isolated antibody or antibody fragment that binds to breast cancer cells and contains the
amino acid sequence of SEQ ID NO:3.

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8. An isolated antibody or antibody fragment that binds to breast cancer cells and contains the amino acid sequence of SEQ ID NO:4.

9. An isolated antibody or antibody fragment that binds to breast cancer cells and contains the
5 amino acid sequence of SEQ ID NO: 5.

10. An isolated antibody or antibody fragment that binds to breast cancer cells and contains the amino acid sequence of SEQ ID NO: 6.

10 11. A method for screening breast cancer cells, comprising the step of contacting said breast cancer cells with one or more antibodies that contain one or more sequences selected from the group consisting of SEQ ID NO: 3, SEQ ID NO: 4, SEQ ID NO: 5, or SEQ ID NO: 6.